Amendments to the Claims:

Please amend Claim 1 as indicated in the following listing of claims, which replaces all prior versions and listings of claims in the application.

Listing of Claims:

1. (Currently Amended) A valve structure comprising:

an elastomeric layer defining a flow channel having walls and a deflectable ceiling;

a first electrode positioned on top of the elastomeric layer over the ceiling of the flow channel; and

a second electrode ~~**positioned beneath**~~ forming at least part of a floor of the flow channel, such that application of a potential difference between the first electrode and the second electrode drives the first electrode and the deflectable ceiling of the flow channel into the flow channel.

2. (Previously Presented) The valve of claim 1 further comprising a reflective micromirror surface positioned over the deflectable ceiling of the flow channel, a physical orientation of the reflective micromirror surface altered when the deflectable ceiling of the flow channel is driven into the flow channel.

3. (Previously Presented) A valve structure comprising:

a first elastomeric layer defining a flow channel having walls and a deflectable ceiling;

a first electrode positioned on top of the first elastomeric layer over the deflectable ceiling of the flow channel;

a second elastomeric layer positioned over the first electrode;

a third elastomeric layer positioned over the second elastomeric layer, the third elastomeric layer defining a control channel having walls and a ceiling, the second elastomeric layer forming a floor of the control channel; and

a second electrode positioned on top of the third elastomeric layer over the control channel, such that application of a potential difference between the first electrode and the second electrode drives the first electrode and the second electrode together, causing the walls of the control channel and of the underlying flow channel to be driven together.

4. (Previously Presented) The valve of claim 3 further comprising a reflective micromirror surface positioned over the deflectable ceiling of the flow channel, a physical orientation of the reflective micromirror surface altered when the deflectable ceiling of the flow channel is driven into the flow channel.

5. (Withdrawn) A method of fabricating an electrostatically actuated elastomeric valve structure comprising:

patterning a raised photoresist line on a semiconductor substrate;

forming an elastomer material over the raised line;

lithographically etching a conductor layer of a conductor/insulator laminate material to form a conductive line;

placing the conductive line on top of the elastomer material over the raised line; and

removing the elastomer material from the raised line and placing the elastomer material against an electrode, such that a space in the elastomer formerly occupied by the raised line comprises a flow channel.

6. (Withdrawn) The method of claim 5 further comprising forming a reflective micromirror surface over the flow channel.

7. (Withdrawn) A method of fabricating an electrostatically actuated elastomeric valve structure comprising:

forming a flow channel-containing portion by,

patterning a first raised photoresist line on a first semiconductor substrate,

forming a first elastomer material over the first raised line,

patterning a conductor layer of a first conductor/insulator laminate material to form a first conductive line,

placing the conductive line on top of the first elastomer material over the raised line, and

forming a second elastomer layer over the conductive line;

forming a control channel-containing portion by,

patterning a second raised photoresist line on a second semiconductor substrate,

forming a third elastomer material over the second raised line,

patterning a conductor layer of a second conductor/insulator laminate material to form a second conductive line, and

placing the second conductive line on top of the third elastomer material and over the raised line; and

combining the control channel-containing portion to the flow channel-containing portion to form the valve by,

removing the third elastomer material from the second raised photoresist line, and

placing the third elastomer material on top of the second elastomer material, such that the first conductive line overlies the second conductive line separated by a control channel in a space in the third elastomer layer formerly occupied by the second raised line.

8. (Withdrawn) The method of claim 7 further comprising forming a micromirror surface over the control channel.

9. (Withdrawn) A method of electrostatically actuating an elastomeric valve structure comprising:

positioning a first electrode as a floor of a flow channel in an elastomer layer;

positioning a flexible conductive wire over a ceiling portion of the flow channel; and

applying a potential difference between the first electrode and the flexible conductive wire, such that the flexible wire and the ceiling portion of the flow channel are driven into the flow channel.

10. (Withdrawn) A method of electrostatically actuating an elastomeric valve structure comprising:

positioning a first flexible conductive wire over a ceiling portion of a flow channel formed in a first elastomeric layer;

positioning a second flexible conductive wire over a ceiling portion of a control channel formed in a second elastomeric layer integral with the first elastomeric layer;

applying a potential difference between the first flexible conductive wire and the second flexible conductive wire, such that the ceiling portion of the flow channel and the ceiling portion of the control channel are driven into the control channel, and walls of the flow channel in the first elastomeric layer are brought together.

11. (Withdrawn) A method of changing a path of an optical beam comprising:

providing a reflective surface overlying a ceiling of a channel formed in an elastomer material;

providing a first electrode overlying the ceiling of the channel formed in the elastomer material;

applying an optical beam to the reflective surface;

creating an electrostatic force between the ceiling of the channel and a second electrode underlying the first electrode, such that the ceiling of the channel and the reflective surface are at least partially driven into the channel; and

again applying the optical beam to the reflective surface.